

PUBLIC UTILITIES COMMISSION  
505 Van Ness Avenue  
San Francisco CA 94102-3298



**Pacific Gas & Electric Company**  
**ELC (Corp ID 39)**  
**Status of Advice Letter 6664E**  
**As of August 30, 2022**

Subject: Modifications to PG&E's Electric Rule No. 21 Tariff ("Generating Facility Interconnections")  
To Address Direct Current Electric Vehicle Supply Equipment Projects Certification Time  
Frame

Division Assigned: Energy

Date Filed: 07-27-2022

Date to Calendar: 08-01-2022

Authorizing Documents: None

<b>Disposition:</b>	<b>Accepted</b>
<b>Effective Date:</b>	<b>07-27-2022</b>

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

[edtariffunit@cpuc.ca.gov](mailto:edtariffunit@cpuc.ca.gov)

AL Certificate Contact Information:

Kimberly Loo

(415)973-4587

[PGETariffs@pge.com](mailto:PGETariffs@pge.com)

**PUBLIC UTILITIES COMMISSION**  
505 Van Ness Avenue  
San Francisco CA 94102-3298



To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

The Energy Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

- Advice Letter Number
- Name of Filer
- CPUC Corporate ID number of Filer
- Subject of Filing
- Date Filed
- Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)
- Effective Date of Filing
- Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Energy Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Energy Division staff based on the information contained in the Energy Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Energy Division's Tariff Unit by e-mail to  
**[edtariffunit@cpuc.ca.gov](mailto:edtariffunit@cpuc.ca.gov)**

July 27, 2022

**Advice 6664-E**

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

**Subject: Modifications to PG&E's Electric Rule No. 21 Tariff ("Generating Facility Interconnections") To Address Direct Current Electric Vehicle Supply Equipment Projects Certification Time Frame**

**Purpose**

Pacific Gas and Electric Company (PG&E) hereby submits this Tier 1 advice letter to propose modifications to PG&E's Electric Rule No. 21 Tariff ("Generating Facility Interconnections") to provide information regarding certification requirements for interconnection applicants with Electric Vehicle Supply Equipment (EVSE) with stationary inverter for direct current charging of vehicles (V2G DC EVSE).

**Background**

The California Public Utilities Commission ("CPUC" or "Commission") adopted Order Instituting Rulemaking (R.) 17-07-007 on July 13, 2017, to consider a variety of refinements to the interconnection of distributed energy resources under Electric Tariff Rule 21 of the Utilities and the equivalent tariff rules of the small and multi-jurisdictional electric utilities.

The October 2, 2017, *Scoping Memo of Assigned Commissioner and Administrative Law Judge* (Scoping Memo) set forth the scope and schedule of the proceeding, including establishment of the working group process, whereby resolution of the technical issues of the proceeding would be proposed by Working Groups One through Six.

The Working Group 2 and 3 Decision (D.) 20-09-035<sup>1</sup> (the "Decision") resolved issues assigned to Working Groups Two and Three and the recommendations from Vehicle-to-Grid Alternating Current Subgroup. Among other recommendations, the Decision considered issues and adopted proposals related to the interconnection of electric vehicles and related charging infrastructure and devices, including Proposals 23e:

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<sup>1</sup> [Decision 20-09-035](#) - Date of Issuance 9/30/2020 - *Decision Adopting Recommendations from Working Groups Two, Three, and Subgroup*

- **OP 41:** Proposal 23e is adopted. Interconnection applicants with a V2G DC EVSE system may request permission to switch to bidirectional mode after completing the Rule 21 interconnection process and receiving permission to operate from a utility. Only the manufacturer or approved third-party installer may program or enable bidirectional operation after the permission to operate is given by a utility.

### **Advice Letter (AL) 6209-E<sup>2</sup>**

On May 28, 2021, pursuant to Ordering Paragraphs (OP) 41-42 and 44 of the Decision, San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE), and PG&E – collectively, the Utilities – submitted a Joint Advice Letter 3774-E (SDG&E), 4510-E (SCE), and 6209-E (PG&E) (Joint Advice Letter). This Joint Advice Letter addressed, among other things, the implementation steps for V2G DC EVSE interconnections and the certification requirements and limitations for V2G DC ready EVSE devices.

The Utilities noted in the Joint Advice Letter that V2G DC EVSE Generating Facilities must meet all the applicable certification requirements at the time of an interconnection request, those certification requirements evolve over time and V2G DC systems that had all the applicable certification requirements at the time of purchase could find that they cannot be interconnected because the certification standards change from the time of purchase to the time of interconnection request. To address this issue, the Utilities proposed the following exception for V2G DC systems in the Joint Advice Letter:

- Utilities will accept the certification for the model year of the EVSE for five years after model year. In this case, if a customer purchases a V2G DC system that meets all Rule 21 certification requirements for such year, then utilities will accept the application even if the certification requirements have evolved, provided that the interconnection request is submitted no later than five years after the EVSE model year.
- The proposed V2G DC system must not impose any safety risks due to not complying with applicable requirements at the time of interconnection.

The Joint Advice Letter was approved and made effective as of November 5, 2021.

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<sup>2</sup> [AL 6209-E](#) - Joint Advice Letter Proposing Interconnection Pathway For Vehicle-To-Grid Alternating Current Projects And Implementation Steps For Direct Current Electric Vehicle Supply Equipment Projects, Pursuant To Decision 20-09-035

**This Advice Letter**

To memorialize the certification time frame approved in the Joint Advice Letter for V2G DC-ready EVSE devices, PG&E, in collaboration with the other Utilities, proposes to revise its Electric Rule No. 21 Tariff, Section Hh, "Smart Inverter Generating Facility Design and Operating Requirements," to include the following footnote:

\*\* V2G DC EVSE manufactured in an earlier year will be deemed to meet certification requirements and allowed to interconnect as long as the EVSE: (1) met all applicable certification requirements in the year of manufacture (the "model year"); (2) the model year is no more than five years old; and (3) the EVSE does not impose any safety risks due to not complying with applicable requirements at the time of interconnection.

For convenience of the reader, PG&E has included "track-change" or "redline" revisions of Electric Rule No. 21 in Attachment 2.

No cost information is required for this advice letter.

This advice letter will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

**Protests**

Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than August 16, 2022, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division  
ED Tariff Unit  
E-mail: EDTariffUnit@cpuc.ca.gov

The protest shall also be electronically sent to PG&E via E-mail at the address shown below on the same date it is electronically delivered to the Commission:

Sidney Bob Dietz II  
Director, Regulatory Relations  
c/o Megan Lawson  
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name and e-mail address of the protestant; and

statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

**Effective Date**

Pursuant to General Order (GO) 96-B, Rule 5.1, this advice letter is submitted with a Tier 1 designation. PG&E requests that this Tier 1 advice submittal become effective upon date of submittal, which is July 27, 2022.

**Notice**

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically to parties shown on the attached list and the parties on the service list for R.17-07-007. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process\_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: <http://www.pge.com/tariffs/>.

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/S/

Sidney Bob Dietz II  
Director, Regulatory Relations

**Attachments:**

Attachment 1: Tariffs  
Attachment 2: Redline Tariff Revisions

cc: Service List R.17-07-007



# ADVICE LETTER SUMMARY

## ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39 E)

Utility type:

- ELC       GAS       WATER  
 PLC       HEAT

Contact Person: Kimberly Loo

Phone #: (415)973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: KELM@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas      WATER = Water  
 PLC = Pipeline      HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 6664-E

Tier Designation: 1

Subject of AL: Modifications to PG&E's Electric Rule No. 21 Tariff ("Generating Facility Interconnections") To Address Direct Current Electric Vehicle Supply Equipment Projects Certification Time Frame

Keywords (choose from CPUC listing): Rule 21,

AL Type:  Monthly  Quarterly  Annual  One-Time  Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested?  Yes  No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required?  Yes  No

Requested effective date: 7/27/22

No. of tariff sheets: 7

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: See Attachment 1

Service affected and changes proposed<sup>1</sup>: N/A

Pending advice letters that revise the same tariff sheets: 5915-E-B (approved, but not yet effective)

<sup>1</sup>Discuss in AL if more space is needed.

**Protests and correspondence regarding this AL are to be sent via email and are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:**

California Public Utilities Commission  
Energy Division Tariff Unit Email:  
[EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Contact Name: Sidnev Bob Dietz II. c/o Megan Lawson  
Title: Director, Regulatory Relations  
Utility/Entity Name: Pacific Gas and Electric Company  
  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email: PGETariffs@pge.com

Contact Name:  
Title:  
Utility/Entity Name:  
  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

CPUC  
Energy Division Tariff Unit  
505 Van Ness Avenue  
San Francisco, CA 94102

Clear Form

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
53828-E	ELECTRIC RULE NO. 21 GENERATING FACILITY INTERCONNECTIONS Sheet 192	52844-E*
53829-E	ELECTRIC RULE NO. 21 GENERATING FACILITY INTERCONNECTIONS Sheet 193	52845-E
53830-E	ELECTRIC RULE NO. 21 GENERATING FACILITY INTERCONNECTIONS Sheet 194	52846-E
53831-E	ELECTRIC RULE NO. 21 GENERATING FACILITY INTERCONNECTIONS Sheet 195	51840-E
53832-E	ELECTRIC RULE NO. 21 GENERATING FACILITY INTERCONNECTIONS Sheet 196	51841-E
53833-E	ELECTRIC TABLE OF CONTENTS Sheet 1	53806-E
53834-E	ELECTRIC TABLE OF CONTENTS Sheet 20	53803-E



**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 192

**Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)**

The inverter requirements are intended to be consistent with UL 1741 - Supplement SA<sup>\*</sup> <sup>\*\*</sup> using Section Hh of Rule 21 as the source requirement document and ANSI/IEEE 1547-2003 and 1547a Standard for Interconnecting Distributed Resources with Electric Power Systems (IEEE 1547 including amendment 1547a), where possible. In the event of conflict between this Rule, and UL 1741 - Supplement SA, and/or IEEE 1547-2003 or IEEE 1547a, this Rule shall take precedence. Exceptions are taken to IEEE 1547 Clauses 4.1.4.2 Distribution Secondary Spot Networks and Clauses 4.1.8.1 or 5.1.3.1, which address Protection from Electromagnetic Interference. Rule 21 does not adopt the Generating Facility power limitation of 10 MW incorporated in IEEE 1547. (T)

The Smart Inverter default settings and default activation states may be modified upon mutual agreement between Applicant or Producer and Distribution Provider. (P)

**Process for changing default settings for new Interconnection Requests:**

Distribution Provider, in the study process for new Generating Facilities, may determine and provide the optimum Smart Inverter Settings for the reactive power settings, including changes to the reactive power default settings (Example: Deactivate Volt/Var and activate Fixed Power Factor at given power factor).

Distribution Provider, in the study process for new Generating Facilities, may determine and provide the optimum Smart Inverter Settings for the Ramp Rate settings depending on the Generating Facility technology (such as solar, storage). (L)

<sup>\*</sup>Any DC V2G Electric Vehicle Service Equipment (EVSE) that has UL 1741 certification - but not UL 1741 SA certification, any subsequent UL 1741 supplement certification required in Rule 21, or Smart Inverter Working Group-recommended smart inverter functions - may interconnect initially for the purpose of participating in the Emergency Load Reduction Program (ELRP), subject to all other Rule 21 interconnection requirements.

PG&E may request the termination of this interconnection pathway via a Tier 2 Advice Letter after the 2024 ELRP season if the market has developed to provide multiple V2G capable EVSEs that meet the full smart inverter certification standards required in Rule 21. Termination of this pathway would not affect previously interconnected EVSE, and they may continue to operate parallel to the grid as per their Interconnection Agreement.

<sup>\*\*</sup> V2G DC EVSE manufactured in an earlier year will be deemed to meet certification requirements and allowed to interconnect as long as the EVSE: (1) met all applicable certification requirements in the year of manufacture (the "model year"); (2) the model year is no more than five years old; and (3) the EVSE does not impose any safety risks due to not complying with applicable requirements at the time of interconnection. (N)  
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(N)

(Continued)



**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 193

**Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)**

Process for changing default settings for new Interconnection Requests (Cont'd):

Distribution Provider, in the study process for new Generating Facilities, may determine the optimum Smart Inverter Settings for the volt/watt settings including changes to the default settings (Example: Change the volt/watt set points). The Applicant may select to agree on the new settings or select to perform upgrades to operate using the existing default volt/watt settings.

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(L)

Default settings for voltage ride-through, frequency ride-through requirements, and Frequency/Watt should not be modified on an individual project basis unless the Interconnection Studies have determined that the default settings may not meet grid reliability requirements.

Process for changing default settings for Generating Facilities with an executed Interconnection Agreement:

When grid changes or Generating Facility changes require that the Smart Inverter operating parameters be reevaluated, the Distribution Provider or Producer may request changes to the Smart Inverter operating parameters. The request must include the reason for and timing of the proposed changes. The requested changes must be within the Smart Inverter function adjustability limits, must be within the limits specified in this tariff, and must be mutually agreed upon.

**1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS**

The Protective Functions and requirements of this Rule are designed to protect Distribution Provider's Distribution and Transmission System and not the Generating Facility. A Producer shall be solely responsible for providing adequate protection for its Generating Facility and Interconnection Facilities. Producer's Protective Functions shall not impact the operation of other Protective Functions on Distribution Provider's Distribution and Transmission System in a manner that would affect Distribution Provider's capability of providing reliable service to its customers.

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(L)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 195

Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)

1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS (Cont'd.)

b. Momentary Paralleling Generating Facilities

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With Distribution Provider's approval, the transfer switch or scheme used to transfer Producer's loads from Distribution Provider's Distribution or Transmission System to Producer's Generating Facility may be used in lieu of the Protective Functions required for Parallel Operation.

c. Suitable Equipment Required

Circuit breakers or other interrupting equipment located at the Point of Common Coupling (PCC) must be Certified or "Listed" (as defined in Article 100, the Definitions Section of the National Electrical Code) as suitable for their intended application. This includes being capable of interrupting the maximum available fault current expected at their location. Producer's Smart Inverter and Interconnection Facilities shall be designed so that the failure of any single device or component shall not potentially compromise the safety and reliability of Distribution Provider's Distribution and Transmission System. The Smart Inverter paralleling-device shall be capable of withstanding 220% of the Interconnection Facility rated voltage (IEEE 1547-4.1.8.3). The Interconnection Facility shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Std C62.41.2-2002 or IEEE Std C37.90.1-2002 as applicable and as described in L.3.e (IEEE 1547-4.1.8.2).

d. Visible Disconnect Required

When required by Distribution Provider's operating practices, Producer shall furnish and install a ganged, manually-operated isolating switch (or a comparable device mutually agreed upon by Distribution Provider and Producer) near the Point of Interconnection to isolate the Smart Inverter from Distribution Provider's Distribution or Transmission System. The device does not have to be rated for load break nor provide over-current protection.

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(L)

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**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 196

Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)

1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS (Cont'd.)

d. Visible Disconnect Required (Cont'd.)

The device must:

(i) allow visible verification that separation has been accomplished. (This requirement may be met by opening the enclosure to observe contact separation.)

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(ii) include markings or signage that clearly indicates open and closed positions.

(iii) be capable of being reached:

a) for Emergency purposes quickly and conveniently 24 hours a day by Distribution Provider personnel for construction, operation, maintenance, inspection, testing or to isolate the Smart Inverter from Distribution Provider's Distribution or Transmission System without obstacles or requiring those seeking access to obtain keys, special permission, or security clearances.

b) for Non-Emergency purposes during normal business hours. Distribution Provider, where possible, will provide notice to Customer for gaining access to Customer's premises.

(iv) be capable of being locked in the open position.

(v) be clearly marked on the submitted single line diagram and its type and location approved by Distribution Provider prior to installation. If the device is not adjacent to the PCC, permanent signage must be installed at a Distribution Provider approved location providing a clear description of the location of the device. If the switch is not accessible outside the locked premises, signage with contact information and a Distribution Provider approved locking device for the premises shall be installed.

Generating Facilities with Non-Islanding inverters totaling one (1) kilovolt-ampere (kVA) or less are exempt from this requirement.

(Continued)



**ELECTRIC TABLE OF CONTENTS**

Sheet 1

**TABLE OF CONTENTS**

<b>SCHEDULE</b>	<b>TITLE OF SHEET</b>	<b>CAL P.U.C. SHEET NO.</b>
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Rate Schedules.....	52160,52161,53807,52163,52164,52165,52034,49654,49184-E	
Preliminary Statements.....	49185,48878,50629,50630,53576,50058,53706-E	
Preliminary Statements, Rules.....		53707-E
Rules .....		50633, <b>53834-E</b> (T)
Rules, Maps, Contracts and Deviations.....		52223-E
Sample Forms.....	50636,49743,50637,50638,50639,49735,	
.....	50640,53589,52256,52257,49309,49310,49311-E	

(Continued)

Advice 6664-E  
Decision

Issued by  
**Meredith Allen**  
Vice President, Regulatory Affairs

Submitted July 27, 2022  
Effective July 27, 2022  
Resolution



ELECTRIC TABLE OF CONTENTS

Sheet 20

Table with columns: RULE, TITLE OF SHEET, CAL P.U.C. SHEET NO. Includes entries for Rule 21 (Generating Facility Interconnections), Rule 22 (Direct Access Service), Rule 22.1 (Direct Access Service Switching Exemption Rules), Rule 23 (Standby Service), and Rule 23.2 (Community Choice Aggregation Open Season).

(Continued)

## Attachment 2

### Redline Tariff Revisions

For convenience of the reader, PG&E has included redline revisions in Attachment 2. These redline revisions only include sheets that have been modified in this advice letter (AL 6664-E). Where Electric Rule 21 has been revised, the affected sheets are included in Attachment 1.

In this advice letter and accordance to CPUC General Order 96B, Section 9.5.3, PG&E has implemented the use of the “(P)” symbol to signify material subject to change under a pending advice letter. The redlines in Attachment 2 are color coded to the specific advice letter. The color coding is as follows:

Redline Text Color	Advice Letter	Subject	Comments
	5915-E-B	Second Supplemental: Advice Letter Modifying Electric Rule 21 Pursuant to Decision 20-09-035 for Working Group 2 and 3 (due 120 Days from Issuance) for Ordering Paragraphs 6 and 11	Approved with modifications by Resolution E-5172. Pending final disposition.
	6664-E	Modifications to PG&E's Electric Rule No. 21 Tariff (“Generating Facility Interconnections”) To Address Direct Current Electric Vehicle Supply Equipment Projects Certification Time Frame	In this advice letter, revisions are made to provide information regarding certification requirements for interconnection applicants with EVSE with stationary inverter for V2G DC EVSE.



**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 183

**Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)**

The inverter requirements are intended to be consistent with UL 1741 - Supplement SA\*\* using Section Hh of Rule 21 as the source requirement document and ANSI/IEEE 1547-2003 and 1547a Standard for Interconnecting Distributed Resources with Electric Power Systems (IEEE 1547 including amendment 1547a), where possible. In the event of conflict between this Rule, and UL 1741 - Supplement SA, and/or IEEE 1547-2003 or IEEE 1547a, this Rule shall take precedence. Exceptions are taken to IEEE 1547 Clauses 4.1.4.2 Distribution Secondary Spot Networks and Clauses 4.1.8.1 or 5.1.3.1, which address Protection from Electromagnetic Interference. Rule 21 does not adopt the Generating Facility power limitation of 10 MW incorporated in IEEE 1547.

The Smart Inverter default settings and default activation states may be modified upon mutual agreement between Applicant or Producer and Distribution Provider. (P)

Process for changing default settings for new Interconnection Requests:

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\* Any DC V2G Electric Vehicle Service Equipment (EVSE) that has UL 1741 certification - but not UL 1741 SA certification, any subsequent UL 1741 supplement certification required in Rule 21, or Smart Inverter Working Group-recommended smart inverter functions - may interconnect initially for the purpose of participating in the Emergency Load Reduction Program (ELRP), subject to all other Rule 21 interconnection requirements.

PG&E may request the termination of this interconnection pathway after the 2024 ELRP season if the market has developed to provide multiple V2G capable EVSEs that meet the full smart inverter certification standards required in Rule 21. Termination of this pathway would not affect previously interconnected EVSE, and they may continue to operate parallel to the grid as per their Interconnection Agreement.

\*\* V2G DC EVSE manufactured in an earlier year will be deemed to meet certification requirements and allowed to interconnect as long as the EVSE: (1) met all applicable certification requirements in the year of manufacture (the "model year"); (2) the model year is no more than five years old; and (3) the EVSE does not impose any safety risks due to not complying with applicable requirements at the time of interconnection. (N)  
(N)

(Continued)

Advice	5988-E-A	Issued by	Submitted	May 19, 2021
Decision	D.20-09-035	<b>Robert S. Kenney</b>	Effective	May 19, 2021
		Vice President, Regulatory Affairs	Resolution	



**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 183

Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)

Process for changing default settings for new Interconnection Requests (Cont'd):

Distribution Provider, in the study process for new Generating Facilities, may determine the optimum Smart Inverter Settings for the volt/watt settings including changes to the default settings (Example: Change the volt/watt set points). The Applicant may select to agree on the new settings or select to perform upgrades to operate using the existing default volt/watt settings.

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1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS

The Protective Functions and requirements of this Rule are designed to protect Distribution Provider's Distribution and Transmission System and not the Generating Facility. A Producer shall be solely responsible for providing adequate protection for its Generating Facility and Interconnection Facilities. Producer's Protective Functions shall not impact the operation of other Protective Functions on Distribution Provider's Distribution and Transmission System in a manner that would affect Distribution Provider's capability of providing reliable service to its customers.

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Advice	5988-E-A	Issued by	Submitted	May 19, 2021
Decision	D.20-09-035	<b>Robert S. Kenney</b>	Effective	May 19, 2021
		Vice President, Regulatory Affairs	Resolution	





**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 185

Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)

1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS (Cont'd.)

b. Momentary Paralleling Generating Facilities

With Distribution Provider's approval, the transfer switch or scheme used to transfer Producer's loads from Distribution Provider's Distribution or Transmission System to Producer's Generating Facility may be used in lieu of the Protective Functions required for Parallel Operation.

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c. Suitable Equipment Required

Circuit breakers or other interrupting equipment located at the Point of Common Coupling (PCC) must be Certified or "Listed" (as defined in Article 100, the Definitions Section of the National Electrical Code) as suitable for their intended application. This includes being capable of interrupting the maximum available fault current expected at their location. Producer's Smart Inverter and Interconnection Facilities shall be designed so that the failure of any single device or component shall not potentially compromise the safety and reliability of Distribution Provider's Distribution and Transmission System. The Smart Inverter paralleling-device shall be capable of withstanding 220% of the Interconnection Facility rated voltage (IEEE 1547-4.1.8.3). The Interconnection Facility shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Std C62.41.2-2002 or IEEE Std C37.90.1-2002 as applicable and as described in L.3.e (IEEE 1547-4.1.8.2).

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(Continued)



**ELECTRIC RULE NO. 21**  
**GENERATING FACILITY INTERCONNECTIONS**

Sheet 186

Hh. SMART INVERTER GENERATING FACILITY DESIGN AND OPERATING REQUIREMENTS (Cont'd.)

1. GENERAL INTERCONNECTION AND PROTECTIVE FUNCTION REQUIREMENTS (Cont'd.)

d. Visible Disconnect Required (Cont'd.)

The device must:

(i) allow visible verification that separation has been accomplished. (This requirement may be met by opening the enclosure to observe contact separation.)

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(ii) include markings or signage that clearly indicates open and closed positions.

(iii) be capable of being reached:

a) for Emergency purposes quickly and conveniently 24 hours a day by Distribution Provider personnel for construction, operation, maintenance, inspection, testing or to isolate the Smart Inverter from Distribution Provider's Distribution or Transmission System without obstacles or requiring those seeking access to obtain keys, special permission, or security clearances.

b) for Non-Emergency purposes during normal business hours. Distribution Provider, where possible, will provide notice to Customer for gaining access to Customer's premises.

(iv) be capable of being locked in the open position.

(v) be clearly marked on the submitted single line diagram and its type and location approved by Distribution Provider prior to installation. If the device is not adjacent to the PCC, permanent signage must be installed at a Distribution Provider approved location providing a clear description of the location of the device. If the switch is not accessible outside the locked premises, signage with contact information and a Distribution Provider approved locking device for the premises shall be installed.

Generating Facilities with Non-Islanding inverters totaling one (1) kilovolt-ampere (kVA) or less are exempt from this requirement.

(Continued)

Advice	5988-E-A	Issued by	Submitted	May 19, 2021
Decision	D.20-09-035	<b>Robert S. Kenney</b>	Effective	May 19, 2021
		Vice President, Regulatory Affairs	Resolution	

**PG&E Gas and Electric  
Advice Submittal List  
General Order 96-B, Section IV**

AT&T  
Albion Power Company

Alta Power Group, LLC  
Anderson & Poole

Atlas ReFuel  
BART

Barkovich & Yap, Inc.  
Braun Blasing Smith Wynne, P.C.  
California Cotton Ginners & Growers Assn  
California Energy Commission

California Hub for Energy Efficiency  
Financing

California Alternative Energy and  
Advanced Transportation Financing  
Authority  
California Public Utilities Commission  
Calpine

Cameron-Daniel, P.C.  
Casner, Steve  
Center for Biological Diversity

Chevron Pipeline and Power  
City of Palo Alto

City of San Jose  
Clean Power Research  
Coast Economic Consulting  
Commercial Energy  
Crossborder Energy  
Crown Road Energy, LLC  
Davis Wright Tremaine LLP  
Day Carter Murphy

Dept of General Services  
Don Pickett & Associates, Inc.  
Douglass & Liddell

East Bay Community Energy Ellison  
Schneider & Harris LLP  
Engineers and Scientists of California

GenOn Energy, Inc.  
Goodin, MacBride, Squeri, Schlotz &  
Ritchie  
Green Power Institute  
Hanna & Morton  
ICF  
International Power Technology

Intertie

Intestate Gas Services, Inc.  
Kelly Group  
Ken Bohn Consulting  
Keyes & Fox LLP  
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated  
Waste Management Task Force  
MRW & Associates  
Manatt Phelps Phillips  
Marin Energy Authority  
McClintock IP  
McKenzie & Associates

Modesto Irrigation District  
NLine Energy, Inc.  
NRG Solar

OnGrid Solar  
Pacific Gas and Electric Company  
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority  
Regulatory & Cogeneration Service, Inc.  
SCD Energy Solutions  
San Diego Gas & Electric Company

SPURR  
San Francisco Water Power and Sewer  
Sempra Utilities

Sierra Telephone Company, Inc.  
Southern California Edison Company  
Southern California Gas Company  
Spark Energy  
Sun Light & Power  
Sunshine Design  
Stoel Rives LLP

Tecogen, Inc.  
TerraVerde Renewable Partners  
Tiger Natural Gas, Inc.

TransCanada  
Utility Cost Management  
Utility Power Solutions  
Water and Energy Consulting Wellhead  
Electric Company  
Western Manufactured Housing  
Communities Association (WMA)  
Yep Energy